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ORIGINAL ARTICLES.

Ophthalmological Department.

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SYMPATHETIC OPHTHALMIA.

BY THE EDITOR.

Ophthalmia is a term having a general significance, and with certain qualifications indicates inflammatory affections of various structures of the eyelids or eyeball. It was more commonly used by opthalmologists of the past, than it is by those of the present. It has not been long since such terms as "internal," "anterior," "catarrhal," "gonorrheal," "granular," "phlyctenular," "diphtheritic," "scrofulous," "sympathetic" ophthalmia, "ophthalmia tarsi," etc., largely characterized the classification of eye diseases — diseases which not only differed widely in their location, but also in their pathology. Confusion and indefiniteness in practice has been the result. At the present time a nomenclature of greater definiteness is being adopted by most writers and teachers, and the word "ophthalmia" is fast passing out of use, it being now principally restricted to that form called "*sympathetic* ;" but even here, the vagueness of its meaning, and its often misleading import is sufficient reason why it, too, should not be superceded by terms which at once carry truthful topographical and pathological significance with them. Indeed, this has been done by some.

Sympathetic ophthalmia as at present used signifies an inflammation affecting the structures of one eye caused by disease or injury of the other. Forms of sympathetic disease sometimes exists which are not inflammatory, such as spasm of the orbicularis palpebrarum muscle (blepharospasm), and a condition called sympathetic "irritation."

Sympathetic *irritation* often precedes the inflammatory affection, or it may appear and pass off in a few days, but perhaps, to return again, without leading to inflammation. It becomes apparent, not by any distinct pathological changes, but by a peculiar inefficiency or weakness of the ciliary muscle as shown by asthenopic symptoms, such as an inability to employ the eyes, except for a short time, for reading, and near and fine work, without blurring; pain around and above the eyes; a disposition to compress them either with the hand, or with strong contraction of the orbicular muscles; with, perhaps, photophobia; rozy zone of hyperæmia around the cornea; lachrymation, etc., all of which gradually pass off when the eyes are allowed to rest. In some cases there is also a degree off amblyopia, or impaired vision, from a functional, and perhaps organic, involvement of the retina. This "irritation" is usually most marked when the other offending eye, be it traumatically, or otherwise diseased, is painful, or more or less inflamed. Sympathetic irritation may appear in a few weeks, a few months, or several years after an injury or disease of the primarily affected eye.

When the sympathetic affection becomes inflammatory, the iris, ciliary body, choroid, or retina, alone, or two or more of these structures at the same time, may be involved. The vitreous body may also become implicated. More rarely the optic nerve and even the cornea, suffer from sympathetic inflammation.

The symptoms of sympathetic ophthalmia vary with the structures affected and with the character and degree of the inflammatory action. That form which is most common, and which may be found in all grades of severity, is inflammation of the iris and ciliary body (*irido-cyclitis*), or of the iris, ciliary body and choroid (*irido-cyclo-choroiditis*, or *irido-choroiditis*). Inflammation of the choroid and retina (*choroido-retinitis*) is less frequent, and inflammation of the

optic nerve or its neurilemma and the retina (*neuro-retinitis*), or that of the cornea (*keratitis*), are still more rare. The inflammation may be ushered in by sympathetic irritation of short or long (periodic) duration, and is first indicated by pain, although this is absent in some cases, photophobia, lachrymation and peri-corneal tenderness and hyperæmia, redness and swelling of the lids in some cases, as well as of the ocular conjunctiva, especially if it assumes an active form. In irido-cyclitis or irido-choroiditis, which can scarcely be distinguished from each other, there is always a tendency toward the "plastic" variety. The iris loses its lustre and mobility and becomes discolored, and there may be rapid effusion of inflammatory products both within the parenchyma of the iris and on its surface, the deposition filling in and "blocking up" the pupillary space and gluing the pupillary margin of the iris to the lens, suspensory ligament and ciliary body, often uniting them together into one mass.

When the sympathetic disease assumes an iritis alone, it is usually of the "serous" variety, and an excess of serous transudation, instead of lymph takes place, giving great depth to the anterior chamber in connection with the other symptoms of an iritis.

Sympathetic choroido-retinitis, and neuro-retinitis, manifest those symptoms which are present in these diseases from other causes, such as impaired vision, contracted field of vision, photophobia, etc., and those appearances characteristically shown by the ophthalmoscope when the transparent media are not clouded.

Sympathethic keratitis, which is very rare, has the symptoms of an inflammation of the cornea.

The course of sympathetic ophthalmia, whether begun in an insidious, or in a violent attack, varies much in different cases, but the tendency in all cases is toward hopeless impairment of vision or total blindness. It is sometimes the case that the disease assumes a mild form, creating little damage to the eye, when its functions may to a certain extent be restored, at least for a time, and often permanently, if the cause be removed. It may often be arrested, also, in the stage of "irritation." As a rule, however, the prognosis is unfavorable in all cases, especially if the cause remain

active, and sometimes when it does not. If there be exudative products in more or less abundance, they are not absorbed and cleared away, but degeneration takes place, with atrophy of the eye-ball. In very rare instances suppuration supervenes, and destruction of the eye is the result.

The diagnosis of sympathetic inflammation is rendered evident when, in connection with its symptoms, the other eye has been injured or diseased, and tenderness continues, or appears at times, in its ciliary region.

The manner in which sympathetic ophthalmia is propagated from an unhealthy or injured eye to the sound one has been a matter of much speculation, and the mystery is not yet fully solved. It was formerly supposed, and the theory has recently been revived by Alt, although in a qualified manner, that the optic nerve is the channel, or at least one of the channels, through which it is transmitted. But most ophthalmologists now hold that it is through the ciliary nerves by some irritation which they suffer, be it from pressure, traction or inflammation, that vaso-motor changes are effected in the sound eye, and the sympathetic disease started. The most satisfactory theory seems to be, that the whole nervous apparatus of the eye participates in the transmission of the peculiar influence which developes the secondary disease.

The time when sympathetic inflammation may appear varies from a few days to several years after the infliction of the primary injury, or the disease of the other eye. The necessary and peculiar irritation of the latter need only be present in sufficient degree to induce it at *any* time. Those advanced in life are less prone to it than the young, and it is also less virulent in them.

The particular conditions, then, which must be sought as the source of sympathetic disease in its varied forms, are found in the other eye, and are brought about by three classes of circumstances which affect the nervous structures of the latter, and especially the ciliary nerves, viz.: First, injuries. These may be wounds of the ciliary body, either punctured, incised, or contused; or those a little distant from this region, as in the cornea, where the iris may have become prolapsed and insnared producing traction and irritation of

the ciliary body; or those of the sclerotic posterior to this important region. Second, foreign bodies within the eye which directly irritate its nervous structures, and particularly those distributed to the ciliary region. Third, such inflammatory, degenerative or other changes as implicate the ciliary or other nerves of the eye, either by direct irritation, traction, or pressure. Among these changes may be found, anterior or porterior synechia; shrinkage, or contraction of fibrinous exudatious following plastic irido-choroiditis; dislocation of the crystaline lens; detachment of the retina; intra-ocular tumors and hemorrages; calcareous choroidal deposits, etc.

The *treatment* resolves itself into, first, removal of the cause, and this may be prophylactic as well as curative; and second, the arrest of the secondary disease, and the rectifying of its consequences, so far as possible.

The removal of the cause of sympathetic ophthalmia must be directed to the primarily affected eye. In a certain class of cases it may be possible to restore this eye to a normal condition ; while in others the only safety seems to be in its enucleation, or in what has been of late introduced as a substitute for enucleation, viz., optico-ciliary neurotomy, a division of the optic and ciliary nerves at their entrance into the eye-ball. Sclerotomy has also been practiced, in lieu of enucleation, and is so performed as to divide the ciliary nerves *behind* the point of injury.

The treatment of the primarily affected eye with reference to preventing sympathetic inflammation varies with its condition. If there is a foreign body lodged within it, or if it has become almost or entirely blind, enucleation is positively indicated before the second eye becomes diseased. If the injury or disease is slight, and vision not greatly impaired, efforts may be made to cure it. As long as tenderness continues in the ciliary region there is danger to the second eye, and the excellence of vision in the first eye alone forbids its removal. But if the vision is poor, and there is no hope of its restoraton, the second eye should not be imperilled by retaining the first, and the latter should be removed.

Preventive treatment, then, is summed up in two affirmations, the second, contingent upon the first, and somewhat qualified. First,

cure the original malady or its effects ; that is, remove foreign bodies, heal injuries, and overcome their effects, and also that of idiopathic diseases, so that ciliary irritation may uot follow; and second, if this cannot be done, and it cannot in many cases, enucleation is indicated, except in rare cases when vision remains fairly good.

The arrest and treatment of the sympathetic disease when once started, varies according to its form and severity. If the offending cause is in the presence of a hopelessly lost eye, it should be removed under all circumstances. Should the sympathetic disease be mild, the enucleation may be of much benefit as a curative measure, but in severe cases it does not arrest it. A serious question often arises, and one which involves great responsibility, and one that must be decided according to the circumstances of the case, which is this: When the injured eye retains considerable vision, should it be sacrificed ? Perhaps not, when the other has become seriously diseased, and the transparent media clouded or blocked up.

In regard to enucleation, I cannot better express the professional sentiment than by quoting resolutions passed by the Ophthalmological Section of the International Medical Congress which met at Geneva in 1877, as follows :

I. "Sympathetic accidents resulting from traumatism of the eye are primary or secondary. The former appear a few days after the accident ; the others at some future time—in months or years—after the patient has recovered from the immediate effects of the wound.

II. "When an eye has been destroyed by traumatic cause, and all hope of restoring a useful degree of vision is lost, an immense service is rendered the patient by relieving him of it at once. He is thus spared the immediate results of the injury, ophthalmitis, etc., and returned in a few days to his work, and, at the same time is preserved from the danger of consecutive accidents. When there is reason to believe that the wounded globe contains a foreign body, the indication for enucliation is still more urgent.

III. "When an eye, lost by a local cause, traumatic or other, or the stump that represents it, is the seat of a continuous or intermittent irritation, or of an acute or chronic inflammation, or contains a foreign body, or a cretaceous lens, enucleation is indicated as a preventive measure, even in the absence of any manifestation of sympathetic irritation.

IV. "The enucleation of a lost eye is indicated, even if it is completely painless, if the second eye becomes the seat of symptoms attributable to sympathy."

Substitutes for enucleation have been introduced, but the future must determine their efficacy.

The treatment of the sympathetic disease itself must be adapted to its nature and location, and directed upon the same principles as in the same disease arising from other causes. Rest and exclusion from light is necessary in almost all cases. If there is iritis, or iridochoroiditis, atropia must be used faithfully, and of a strength sufficient to dilate the pupil, if possible. Other remedies must be applied according to symptoms. Other forms of the ophthalmia must be treated as under other circumstances, and strenuous and persevering efforts made to avert its fearful consequences. Operative measures directed to it are of little avail during its active progress. Indeed, all treatment is too often of no use, and blindness seems to be the inevitable fate. The "*grand opportunity*" for the patient is in the removal of the cause, the offending eye, before any "sympathy" has arisen, and certainly if it be threatened by irritation.

After the disease has subsided its effects may to a certain extent be overcome in some cases by making an artificial pupil, by removal of deposits by certain operations, or by other procedures which the nature of the case may suggest.

DIPHTHERIA AND BACTERIA.

BY ROLLIN R. GREGG, M. D.

There is such a diversity of opinion in the profession, upon the essential nature of Diphtheria, and its best method of treatment, that a few simple, but important facts require to be considered, in order that we may all come to a clearer and better understanding, upon both the pathology and treatment of the disease.

In the first place, then, and in view of what is to follow, the fact should be borne distinctly in mind that the characteristic exudations of diphtheria, that is to say, all the membranes, or membranous formations of the disease, wherever they may organize, are wholly, or principally, fibrin. Of this fact there is no question. Oertel, Vir-

chow and all other prominent writers upon the subject assert such to be the case; and we shall see as we proceed, that this fibrinous character of said membranes, gives us the key to one of the greatest mysteries of the disease. But before proceding further with that part of our subject, we must consider in short, some of the leading characteristics of fibrin, as follows:

First. Fibrin in the proportion of two and two-tenths parts, in one thousand parts of blood, is one of the *natural* constituents of healthy blood.

Second. There never was a drop of healthy blood drawn, and left to itself a few minutes, that it did not coagulate and form a clot of the whole mass; and this clotting is *solely* due to the one part of fibrin in about five hundred parts of blood, fibrillating or organizing into minute threads or fibrils, which extend through all parts of the clot, in an interlacing network, that binds and holds the whole, not only of blood corpuscles, but even the water of the serum, together, for a time, in quite a firm mass.

Third. There is one way, and one way only, in which fibrin ever fibrillates to form a clot of blood, or organizes into a false membrane, (the latter being considered further on,) and that is, that particles of it first coagulate into very minute granules, and then these granules join themselves together and form exceedingly fine threads, which, in turn, interlace to form the clot, or a membrane, as the case may be.

With these few facts bearing upon the nature and action of healthy fibrin, before us, we can now go on and give our attention to a few equally simple and equally important facts in connection with diphtheria.

First, then, under this head, is the fact, that fibrin is always in excess in the blood in diphtheria, as it is in every other inflammatory disease—and generally in greater excess in diphtheria than in most other diseases characterized by the same degree of inflammation.

Second. When fibrin is in excess in the blood, it is *always* a source of more or less danger, as we all know to be the case in pleuritis, peritonitis, etc., and its excess is equally if not more dangerous in diphtheria than in most other diseases.

Third. One of the principal reasons why its excess is so dangerous in diphtheria, is that its natural tendency to coagulate is so great that when there is an accumulation in the circulation of three to four, or certainly of not more than four to five parts to one thousand parts of blood, there is imminent danger of its coagulating into large clots (thrombi) in the heart, that instantly take life, or into small clots, that are washed along by the current of blood until arrested by some smaller artery, when embolism is the result, and death by inflammation and a slower process almost as certainly follows. It is, indeed, in one of these two ways that quite a goodly number of diphtheritic patients perish.

Fourth. When fibrin coagulates into heart-clots, or coagula of it of whatever size form in the circulation, it does so in only one way, and that the same as in the clotting of blood outside of the body, namely, by organizing first into minute granules, and these granules joining together into threads, interlacing through the mass, and making it more or less compact and firm in accordance with the degree of perfection of such fibrillation.

Fifth. Nature is conservative and preservative of life under all circumstances where she possibly can be. Hence, as fibrin is always in excess in the blood in diphtheria, and as all heart-clots and all false membranes of the disease are of fibrin, and the former, or heart-clots, are so extremely dangerous, there can be no question that the exudation and formation of all the membranes of the disease are the result of nature, or the preservative forces of life, stepping in and expelling the excess of fibrin from the blood to *prevent* its accumulation in the circulation to such an extent as to form coagula there that are so fatal.

Sixth. When the excess of fibrin is extravasated, or poured out of the blood vessels upon the surface of the tonsils, or other parts, it rapidly organizes into the diphtheritic membrane; and in doing so, it here again exactly repeats the method of its clotting in healthy blood, or fibrillating into coagula in the circulation, namely, first into granules, and these into threads, and the latter into membranes.

Of course, it will be understood that, in the coagulation of healthy blood, the resulting mass will take the form of the receptacle that

holds it; and also that the clots that form in the circulation are more or less in masses; whereas, when the fibrin is exuded in successive layers upon any surface, as is generally the case in diphtheria, it organizes into a membrane which will be of greater or less extent, and thicker or thiner, according to the quantity and extent of the exudation.

Seventh. Were the excess of fibrin not expelled from the circulation, *every* case of diphtheria would prove fatal in a few days from the formation of large coagula in the heart that would suddenly take life, or small ones that would lead to incurable inflammations, and cause death in that way. In pleuritis and peritonitis the excess of fibrin is generally poured out upon the surface of the pleura and peritoneum, to organize into false membranes there, and to avoid worse results in those diseases also, as in diphtheria. Therefore, let the membranes of diphtheria, although they are in themselves often so serious, be henceforth looked upon in their true light as the work of the conservative efforts of nature, to avoid thrombosis and embolism and a much more certainly fatal issue. And what is of equal importance, let the treatment of this disease hereafter be more in accordance with these incontrovertible facts than it has been in the past, if we would avoid death instead of hasten it.

We can now enter upon a more intelligent discussion of that great mystery thrown around diphtheria by the assumed existence of the so-called bacteria, in connection therewith, than could be had without the foregoing facts before us. But we must first understand the characteristic and varying forms of these assumed bacteria. Oertel classifies them as follows:

(1). "Sphærobacteria (spherical bacteria) *i. e.*, micrococcus."

(2). "Microbacteria (rodlike bacteria) bacterium termo; less frequently, and only in the mouth and fauces, bacterium lineola."

(3.) "Spirobacteria (corkscrew-shaped bacteria), spirillum tenue, spirillum undula."

It should be understood, however, that there is not the slightest proof to show that these bodies are vegetable parasites or organisms, as assumed. The *forms* are there, it is true, and to be seen under the microscope, but every fact recorded of them, and taken

in connection with what precedes, shows that they are simply and only the organizing stages of fibrin; or that the first of these three forms, namely, the spherical bacteria, or micrococci, are the molecular granules into which fibrin always first organizes in the healthy clot of blood, in the heart-clot, and in the membrane of diphtheria, as already described:

That the second form, or rod-like bacteria, are these same molecular granules, or others just like them, united together into threads or rod-like prolongations:

And that the third form, or spiral bacteria are the same, or similar threads of fibrin, which have contracted into more or less of the spiral shape under their firmer organization; and especially so if their ends have been left free from attachments that would hold them straight.

Therefore, there never was a drop of healthy blood coagulated that it did not develop these three forms of so-called bacteria, just the same as any case of diphtheria—the first two while the coagulum was forming, and for a short time after it was formed, and the last as soon as the clot commenced shriveling by the contraction and curling up of the fibrils.

Such, then, is all there is of the great mystery of bacteria, which has exercised the profession so greatly for the past fifteen years, and which has led to treatment as false and fatal as the theory.

The limits of a journal article like this will not allow of one twentieth the proof being given that there is to sustain the views here presented, but two or three points are offered to show that the facts must be as claimed.

That there is no evidence of the minute forms developed in the blood and membranes of diphtheria, being vegetable parasites, as claimed, is shown by the following language of Oertel, vol. 1st, page 587, Ziemssen:

"The vegetable organisms which have been observed in the diphtheritic membranes of the fances and air passages, as well as in other products of the disease, belong to a group which comprises forms of such exceeding minuteness—for they stand upon the very borders of the visible—that, as yet, we possess only the most unsatisfactory knowledge of their nature and organization."

Now, after such a confession of "only the most unsatisfactory knowledge" upon the subject, let us apply to its solution the following facts given by Lehmann and Wood upon the action of fibrin under different circumstances, and see how plain and simple they render this whole question.

Lehmann, speaking of the coagulation of fibrin, Physiological Chemistry, vol. I, page 311, says :

"If we trace this transition of the fibrin from the dissolved fluid condition into the solid state under the microscope, a careful observation shows us that the fresh *liquor sanguinis* exhibits nothing morphological beyond some few colorless blood-corpuscles ; when it begins to gelatinize, separate points or molecular granules appear at various spots, from which arise extremely fine straight threads, in radiating lines, although they do not form star-like masses, as in crystalization ; these threads becoming elongated cross those springing from other solid points, until the whole field of view appears, as it were, covered with a delicate but somewhat irregular cobweb."

This furnishes the proof of the manner of coagulation of healthy fibrin, forming first minute granules and then threads, while all must know that the clots could not shrivel, as they always do, unless these threads contracted into more or less of the spiral form.

So much for the ordinary action of fibrin in forming a clot of blood; now let us consider a little of the proof of its demeanor in organizing false membranes : Wood, vol. I, page 28, says :

"*Coagulable Lymph* is a name applied by English writers to a substance exuded from the vessels of an inflamed part, which, though it escapes in the liquid form, coagulates after exudation, and is capable of becoming organized, and thus forming a new living structure. This plastic substance appears, from chemical analysis, as well as from its physiological properties, to be closely analogous to, if it be not identical with the fibrin of the blood. It appears to be sometimes extravasated with little if any of the other constituents of the blood, but in general is mixed with serous fluid, and is probably thrown out of the blood vessels in the form of liquor sanguinis, or fluid portion of the blood, deprived of the red corpuscles, and possibly somewhat altered in the process of exudation. Of this fluid, the fibrinous part concretes, while the albuminous portion remaining combined with water and saline matters in the form of serum, fills and distends the cavities and interstitial spaces into which it may have been effused, or escapes in the form of flux from exposed surfaces, or those having a natural outlet.

All that is absolutely essential to the organization of the exuded fibrin is that it should be in contact with living tissue. As it first escapes it is a homogeneous, formless, transparent fluid ; but very soon afterwards, if examined by the micro-

scope, it is found to contain *multitudes of fibrils, great numbers of minute granules of different sizes*, and another set of minute bodies, which are often covered by a cellular envelope, and constitute what are called *exudation corpuscles*."

The italics, excepting the first two and the last two words, are our own ; and it might be explained in passing that the "exudation corpuscles" spoken of are simply decolorized blood-corpuscles.

Herein, then, we have the proof of the organization of plastic lymph, or fibrin, into false membranes on *any* living surface, upon which it is extravasated ; which must include the membranes of diphtheria, they being always of fibrin. And in it we also have evidence of the fact claimed that the "homogeneous, formless, transparent fluid" that is first exuded, is "very soon afterwards, if examined by the microscope, found to contain multitudes of fibrils," and "great numbers of minute granules of different sizes," which are the forming stages of the fibrin into the membrane. Then, if the fact is duly considered that it is impossible to point out the slightest physical or other distinction between the micrococci of diphtheria and the molecular granules of fibrin in its false membranes, or between the so-called rod-like bacteria and the fibrils of said membranes, it would seem that our case is made out without further argument. If the fibrin is there, in forms precisely like the three forms of bacteria, as proven, all controversy upon the subject must be at an end.

Certainly no intelligent physician will, or can, reasonably claim that there are two sets of forms, exactly alike in size and appearance, in each stage of their development, alike as a whole, and alike in their consequences upon life ; the one being vegetable and the other animal, and both present in almost infinite numbers in the exudations in every case of diphtheria. That would be absurd.

To my mind nothing in all the doings of men is more astonishing than that these facts have not been applied before. Probably there is not a prominent writer in all the numbers who have writen upon diphtheria, who was not as familiar, and many of them more so, than the author, with the various facts given, as they stood isolated in medical literature ; but the trouble has been the want of an *application* of them. And nothing shows more forcibly the terrible power of error over us all, when we get started wrong.

In conclusion, the cause of fibrin being brought into excess in the blood to produce the results shown, and the question of treatment, which is, after all, the more practical part of the subject, are far too complex for discussion here, and the best I can do now is to refer the reader to my late published work upon the subject. Of one thing, however, all may rest assured, that if we are to have any better results from treatment in the future, than in the past, the whole of it must be changed and made to conform to the true nature of the disease as it is, and not to any false conceptions, we have had of it. But of all things let it hereafter be remembered that if the excess of fibrin were not expelled from the blood vessels upon some surface, to be carried off in a fluid form, or to organize into a membrane, every case of diphtheria would be rendered fatal by said excess coagulating in the heart, or arteries; and that, in either case, the successful treatment must be that which will speedily reduce the excess of fibrin, and restore it to its normal proportions in the blood.

REPLY TO DR. POMEROY.

Mr. Editor :

I noticed in the last issue of the INVESTIGATOR an article headed "Homœopathy the Science of Therapeutics." If this is a fact, it is as astounding as was the advent of Christ into the Jewish economy. The Jews entertained many and divers theories as to this expected form and demeanor of His coming. They looked forward to His appearance with as much solicitude as some of the doctors of past ages have to the expected forthcoming of a *science* of their therapeutics. If out of the past confusion of medical opinion called therapeutics there has arisen indeed and in truth a *science*, it is a great day for those who follow the healing art. And if this science has fallen like Elisha's mantle on the followers of Hahnemann, great will be their rejoicing—how they can now put the Philistines to flight. The theories of eclipse, cycles and epicycles were speedily dismissed when Newton demonstrated the science of gravity. And now we are to infer that the nebulous condition that has heretofore enveloped the administration of drugs, has in like manner been crystalized, re-

duced to a science. Has there a second Newton arisen? Has there at last been a foundation reached for therapeutics? Who is the man that was so fortunate as to be able to gather up the isolated truths of therapeutics and combine them in a *science?* Where does he live? The wise men of old said "where is He? for we have come to worship him." Dr. Pomeroy says, "our experience for more than two generations has demonstrated the fact that homœopathy is a science," and again he says "it is to this end that I have on this occasion directed your attention to the fact that homœopathy is the *science* of therapeutics."

I hardly think Dr. Pomeroy clearly comprehends what the word *science* means, and his quotation from Webster was not taken from the unabridged edition. The quotation reads that science is "a collection of general principles or leading truths relating to any subject." This language is not comprehensive enough to define a science. Science demands not only a "collection" of truths relating to any subject, but the *whole* of those truths or principles; the whole truth and nothing but the truth." In Webster's several definitions of science this idea is prevalent through all of them—comprehensive knowledge, complete knowledge and systematized knowledge. It is not sufficient to obtain a "collection" of truths, in order to establish a science, there must be a *comprehensive* "collection," and then, as he quotes from Worcester, a methodical arrangement of those truths. There is a great difference between the ideas which the words "collection" and *all* represent. Science demands *all* the facts. In the different theories once entertained to account for the phenomena of the planetary system, every one of them left what Philosophers called, "residual phenomena;" facts they could not get into their respective theories. Like the Doctor they tried to establish a science on a "collection" of facts, even if that collection did not include *all* the principles. Now, in his definitions of science, Dr. Pomeroy has left out completely the comprehensive terms that Webster is very particular to use repeatedly. I think the Doctor's science is hardly "comprehensive" enough to suit even himself after all, for he says, "if not mathematically exact it is closely allied to it." I never understood before that science admitted of "closely-allied" principles to estab-

lish any of its truths. Exactness is the only criterion, and that must be comprehensive in character. There is another "residual" principle the Doctor has omitted in his ideal science, which is fatal to his scheme. I wonder he omitted this. It is such a beautiful test of all sciences, and that is, prophecy. Science is the only reliable prophet the world ever knew. In Astronomy it can foretell eclipses, positions and perturbations of planets, change of seasons, day and night, at any given time and place. Philosophy will foretell the momentum of a body under given conditions, the velocity of sound and light, the approach of a storm, etc. Chemistry can foretell the results of a fuse laid either to Hell-Gate rock, a miner's charge, or a torpedo in the outer harbor. Their distinguishing features are they enable their possessors to go beyond the present moment with as much certainty as any experience human life affords. Now does Dr. Pomeroy's knowledge of homœopathy rise to the dignity of a science? Is he possessed of *all* the facts relating to homœopathy? Has he sympathized *all* the facts and can he foretell future events with as much certainty as past results in his respective science? Science demands this. Can the Doctor prescribe for a patient and predict results with as much confidence as a Chemist can predict whether this solution is acid or alkali by use of litmus paper? If he can say to a patient, Sir, at such an hour your pulse will drop to 80, to-morrow your tongue will become clear and your delirium will cease; the day after, at such an hour, your pain will cease; all as the result of your taking this medicine. If he can do these things and vary them and repeat them at will, I will concede that homœopathy is a science, and Dr. Pomeroy is its chief apostle—he will then be able to put all the other pathys to flight. Nothing can withstand such arguments as these. Men never quarrel over demonstrated facts. It is over those things they know but little about that they are ever ready to contend and dispute. Science concedes nothing, tolerates nothing, takes nothing for granted, not even "closely-allied principles." Science comes after theories, opinions and disputations. The Doctor says, "the necessity for the greatest caution and the most jealous vigilance on the part of the friends of homœopathy was never greater than now." If he is the exponent

of a science he need have no fear from "the spirit of intolerance or bigotry," for he says, "therefore all matters that require or demand tolerance and a perfect freedom of opinion and action as to faith and practice, science sustains no relationship." Then wherefore the need of the "vigilance" and "caution on the part of the homœopaths," above quoted? Newton was never disturbed lest the *opinions* of others might upset gravity, and bodies would tend to leave the surface of the earth to accommodate any of his opponents. If the doctor is as certain that he has found the science of therapeutics as he wishes us to believe he is, the size of the dose, the liberty of opinion, bad faith and worse practice, allopathic criticism, and even this article, will fall on him as harmless as did the Pope's bull on Hally's Comet. In fact it will not reach him. I have been striving after the art of therapeutics for many years, but I never expect to attain to its science. The science of therapeutics involves the science of biology, and to that I think we may never attain. The science of life stands first and after that the science of saving life. Before the science of saving life dawns on those of us less favored than Dr. Pomeroy, we will be confronted with Tyndall's three questions, viz: What is matter? What is force? And, how do matter and force think? Give us then the science of biology first, and then we can the better use the science of therapeutics. The philosopher's stone, the universal solvent, the tree of knowledge, the elixir of life and the science of therapeutics, are hallucinations that have turned many minds in the past and some at the present time.

G. L. CHAPMAN.

IN MEMORIAM.

DIED:—Saturday. December 11th, 2 A. M., at 17 E. Eagle St., Mr. Harlow D. Franklin, aged 22 years. The deceased was a native of Angelica, N. Y., and came to this city from Bradford, Pa., to attend the present course of lectures at the College of Physicians and Surgeons. On hearing of Mr. Franklin's premature demise, his fellow students held a meeting in the College Amphitheatre, at which they appointed a committee of six, to draft "Resolutions of Condolence,"

conveying the heartfelt sympathy of the class, to the friends of the deceased in their present affliction, and expressing the high esteem in which the students held their departed friend, which was as follows:

Whereas, In the dispensation of Divine Providence one of our number Mr. Harlow D. Franklin, has been suddenly taken from our midst by death, and

Whereas, We, his fellow students and class-mates, feel that in his death we have lost a true friend and brother, whose sterling qualities of heart and mind have endeared him to our thoughtful consideration and respect, and

Whereas, His manly bearing, gentlemanly deportment, and high order of intellectual attainments are deserving of our respectful remembrance. Therefore

Resolved, That we hereby extend our sincere and heartfelt sympathies to his bereaved parents. Further

Resolved, That we, as a body, meet the friends of the deceased at his residence and accompany them on their departure from the city with his remains. Further

Resolved, That we send a copy of these resolutions to the friends of the deceased; that we send a copy of these resolutions to the Buffalo and Bradford newspapers, and to the *Journal of the College of Physicians and Surgeons* in this city.

In behalf of the students of the College of Physicians and Surgeons, Buffalo, N. Y., by their committee.

DR. C. D. WOODRUFF.
DR. C. J. PHILLIPS.
MR. J. J. GANER.
MR. F. L. SUTTON.
MRS. W. B. PRESTON.
MISS H. D. FISK.

Editorial Department.

With this number of the INVESTIGATOR ends our first year of editorial life in medical journalism.

Twelve months ago we wrote our first editorial with misgivings tco numerous to mention.

At that time we asked the journalistic world to have charity and patience, for, being unfleged in that field, we might err and need their assistance to buoy us over the billows of adversity and breakers of despair, which we naturally expect to meet in every new undertaking. We are happy to say that our anticipations have not been

realized,—not but what we may have erred—but the billows which we expected to have to buffet, the adversity and despair, were all in the imagination. The sea has presented a beautiful, uniform, grand, undulating surface, the light breezes have favored our craft, and the annual tide has brought us to that haven of comfort where we can enjoy a realizing sense of the lessons taught us in our year's endeavor to establish the INVESTIGATOR as the champion of the *True Science of Medicine.*

Our opponents have frankly acknowledged that the principles inculcated by our journal are the only true guides with the intelligent and successful practitioner; that the true science of *Ars Medica* is the correlation of all that is good, irrespectful of any creed, sect or party; and that *non-sectarian* teaching is the most practical, rational, iustructive, and satisfactory.

At the outset two or three would-be Editors of Medical Journals were a little inclined to be captious, and ventured to attack our platform by an infinitesimal fusilade, but their trajectory line of fire lacked *vis a tergo*, due to an erroneous dynamasition calculation, and they were only too willing to retreat, and not repeat. Hence we can say that we have not met with any opposition, that the puerile opposing forces were like Minton's and Worcester's imaginary symptoms of drug action.

The *fraternity* have, as a class, treated us with the utmost kindness, and many are the words of cheer and congratulation from some of the most distinguished collaborators in medical journalism.

THE INVESTIGATOR has been a welcome visitor to more than two thousand readers, and its subscription list is daily becoming increased, and the coming year we shall try to make it more worthy, interesting, and practical to the student and busy practitioner.

The Physicians'and Surgeons'Association have consummated a contract with the new Printing House of Haas & Co. for the printing of the INVESTIGATOR for the ensuing year. With new type, new presses, and new material, but with old and experienced compositors, we expect to have many advantages over our former printers, and be able to present a journal with fewer typographical errors, more

readable and acceptable to our subscribers, who have, indeed, been very lenient with us.

Through inadvertance, or utter lack of knowledge on the part of those in charge of the work, the INVESTIGATOR has at times gone out presenting such a hideous appearance as to cast no little discredit upon the literary ability of its editors, and a great opprobrium upon the compositors and proof reader. With our present advantages we hope and trust to avoid these unpleasant occurrences.

As our journal has been established upon a basis of merit, we ask our readers to assist us in our endeavor by original contributions in any department of the science of medicine, or the collateral sciences.

All communications designed for publication should be received on or before the first of the month; they should be written plainly and punctuated as the author designs them to appear in print; they should be short and practical, and after a careful consideration by the editor in the department to which they belong, should they not be considered of sufficient interest to publish, they will be referred to the editor in chief, Prof. A. A. Hubbell, M. D., for a final disposition; if not published they will be returned to the author, if desired.

Books sent us for our opinions will be thoroughly and carefully reviewed and the criticisms impartially given.

While the editors cannot be responsible for individual ideas expressed in published contributions, they will always hold themselves amenable for the maintenance of the integrity, dignity, and courtesy of the journal.

Selections.

TEST FOR ARSENIC.

Dr. Henry Barnes, in an article on Chronic Accidental Poisoning (*Practitioner*, September, 1880,) suggests, for suspected wall papers, to put some water of ammonia in a white saucer and drop a piece of the paper in this. If a salt of copper is present the water will be tinged with blue. If now a crystal of nitrate of silver is dropped in, and the crystal is covered with a yellow coat, this is due to the presence of the arseniate of silver. This simple test is, as he says, not as well known as it should be.

BORACIC ACID INJECTIONS IN GONORRHŒA.

BY JAMES G. HYNDMAN, M. D.

The first case of this character in which I prescribed boracic acid, was that of a young man in the acute inflammatory stage of the disease, with abundant discharge, frequent and painful micturition, and very troublesome chordee. Several of the more popular remedies had already been given without affording the slightest relief. After the first day's use of a one per cent. solution he was no more troubled by chordee. The pain attending micturition was much lessened after a single injection, and disappeared entirely upon a few repetitions. The discharge rapidly diminished in quantity and changed in character, but did not altogether cease for a week.

In my next case—a female with more profuse vaginal discharge—I ordered, as a vaginal injection, a two per cent. (10 grains to the ounce) solution, with even more striking results. The discharge ceased entirely after the third day's use of the remedy.

Three other cases have occurred in my practice in which equally good results were obtained.

In all, then, I can report five cases treated by boracic acid injections, without the assistance of any internal medication. Gonorrhœa is known to be more difficult to cure in persons who have had previous attacks. Yet three out of these five cases had had the disease repeatedly, and the relief to these three was quite as prompt as to the other two. Not one of these cases was seen until after profuse discharge had commenced. Four were in this stage and the other in the fifth week of the affection. Every one of these patients experienced a decided amelioration of pain after the first injections, and in only one did the discharge continue more than ten days after the beginning of treatment. This case—the one bordering upon gleet—was not wholly cured for four weeks. I instructed each of my patients to practice the injection three or four times daily; in future cases I shall advise only morning and evening injections after the complete cessation of pain.

My experience with these few cases has led me to the conclusion that a one per cent. solution (about five grains of boracic acid in one

fluid ounce of water) will be of sufficient strength for general use.—*Cincinnati Lancet and Clinic*, April, 1880.

TOLERATION OF OPERATIONS BY THE PERITONEUM.

Dr. T. H. Buehler, in the Boston *Medical and Surgical Journal*, October 28, 1880, advocates opening the peritoneum with an *abandon* decidedly interesting. Among other recommendations, the following is for typhoid fever :

"With free access to the peritoneal cavity, it would therefore appear that the medical attendant, unless he be competent to operate, ought, as soon as perforation takes place, to hand his case over at once to a surgeon, whose duty it would be to make the lineal section, and having found the perforation, to get an assistant to close it between his thumb and forefinger, while, with a soft sponge and distilled water, he carefully washes out from between folds of the peritoneum fecal or other matter that may have already escaped. He should then cut from one side of the lineal section a bit of peritoneum with as good a backing of cellular tissue as he can find, and form it into a plug to fit into the perforation pretty tightly, but not so tight as to wrinkle its peritoneal head, which should be exactly adjusted so as to form with the peritoneal covering of the ileum a perfectly smooth surface, as though there were only a crack or narrow crevice between them. Having previously armed six fine catgut or stretched horsehair threads with the most delicate needles, pass them through the edges of the peritoneal covering of the plug and of the intestine at six hexagonal points, and, on tying them, so arrange the knots that they may help to fill up the outer openings made by the needles. Clip off close to the knot the short end of each thread, leaving the longest ones to be used as presently directed. Having made a hexagonal pad out of the peritoneum of a cat or rabbit, previously prepared in chlorinated water, and dried, but moistened when used, let its six sides be nicked at their centers, so as to admit the threads which are now to be carried across the compress, and tied on top of it."

That sounds simple enough, and we are informed that the operation would no doubt succeed in a large majority of instances.

A COMPLETE LIST OF THE PHYSICIANS AND SURGEONS OF ERIE COUNTY WHO HAVE REGISTERED IN THE CLERK'S OFFICE, UNDER THE NEW LAW.

NAME.	GRADUATE OF	DATE.
Abbey, Emery C.	Eclectic Med. College, Philadelphia, Pa.	April, 1863
Abbott, Frank A.	Med. Dept. University of Buffalo	Feb., 1866
Armstrong, J. Stone.	Jefferson Med. College, Phila.	Mar. 12, 187–
Abbott, George	Med. Dept. University of Buffalo	Feb. 25, 1852
Allen, Jabez.	Castleton Med. College, Vt.	Nov. 20, 1833
Appleby, H. T.	Erie County Homœopathic Med. Society.	
Allen, Daniel W.	Med. Dept. University of Buffalo	Feb., 1876
Atwood, Harley L.	Med. Dept. University of Buffalo	Feb., 1872
Brown, George L.	Harvard Med. College, Mass.	June 20, 1870
Brecht, F. E. L.	Med. Dept. University of Buffalo	Feb. 22, 1872
Briggs, Albert H.	Med. Dept. University of Buffalo	Feb. 20, 1871
Banta, Rollin L.	Med. Dept. University of Buffalo	Feb. 20, 1871
Brayton, Samuel N.	Coll. of Phys. and Surg. New York City.	Mar., 1861
Beals, Herbert J.	N. Y. Homœopathic Med. College	Mar., 1878
Barker, Arthur M.	Med. Dept. University of Buffalo	Feb. 20, 1877
Boardman, John.	University of Pennsylvania	Apr. 2, 1853
Bartow, Bernard.	Med. Dept. University of Buffalo	Feb. 25, 1874
Bailey, Daniel A.	Med. Dept. University of Buffalo	Feb., 1872
Barnes, Edwin R.	Long Island Coll. Hosp., Brooklyn, N. Y.	July, 1865
Brooks, Abel D.	Eclectic Med. Coll. of the City of New York.	May 28, 1872
Brooks, A. J.	Albany Medical College	1860
Baethig, Henry.	Hahneman Med. College, of Philadelphia	Mar. 9, 1870
Barrett, William C.	Med. Dept. University of Buffalo	Feb., 1880
Bissell, Elias L.	University of Michigan	Mar. 4, 1861
Bidaman, Weston D.	Med. Dept. University of Buffalo	Feb. 26, 1878
Bull, Louis A.	Med. Dept. University of Buffalo	Feb. 25, 1879
Bull, A. T.	N. Y. University, Medical Department	Mar., 1848
Berkes, Mary.	Med. Dept. University of Buffalo	Feb. 22, 1880
Burt, Franklin.	Coll. of Phys. and Surg. of Ontario, Canada.	May 21, 1878
	And University of Toronto.	June 10, 1879
Bartlett, Frederick W.	Mew York Medical College	Mar., 1854
Bonnar, John D.	University of Trinity College, Toronto	May, 1878
Bourne, C. W.	Castleton Medical College, Vt.	June 12, 1860
Boies, Loren F.	Med. Dept. University of Buffalo	Feb. 25, 1868
Broardt, Peter.	Homœopathic Med. Society of Erie Co.	Dec. 6, 1876
Burwell, Geo. N.	University of Pa., in Philadelphia	April, 1843
Blakely, Isaac C.	Licensed by Med. Dept. Univ'ty of Buffalo.	
Colton, Henry E.	Cleveland Homœopathic College	Feb. 14, 1872
Crane, Lucien D.	Licensed by Eclectic Med Coll. of Genesee Valley District.	June 4, 1879
Crittenden, S. C.	Medical College, Pa.	1857
Clothier, Wm. P.	Med. Dept. University of Buffalo	Feb. 23, 1875
Curtiss, Alexander M.	Pulte Med. College, Cincinnati	May 24, 1877
	Homœopathic Medical College	Feb. 28, 1878
Cronyn, John L. C.	Med. Dept. University of Buffalo	Feb., 1876
Cronyn, John.	University of Toronto	April, 1850
	State Censors of N. Y.	June, 1860
Crane, Ory Philo.	Eclectic Medical Society of the Genesee Valley District.	June, 1879
Cary, Charles.	Med. Dept. University of Buffalo	Feb., 1875

Colyer, Charles W....Med. Dept. University of Buffalo.....Feb., 1862
Champlin, Chas. G...Med. Dept. University of Buffalo.....Feb. 24, 1880
Campbell, Robert E..University of Michigan.....Mar. 25, 1866
Clark, C. G..... ....University of Michigan.....Mar. 13, 1864
Callahan, Thos. H...Eclectic Med. Coll. of Philadelphia, Pa.....Jan. 21, 1863
Clark, Edward.....Med. Dept. University of Buffalo.....Feb. 25, 1880
Caulkings, Frank.....Student in College of Physicians and Snrgeons at Buffalo, and intending to graduate within lawful time..... 1880
Daniels, Clayton M...Med. Dept. University of Buffalo... .....Feb. 25, 1880
Dagenais, Alphonse..Victoria University, Canada.....May 10, 1867
Diehl, Conrad.....Med. Dept. University of Buffalo.....Feb., 1866
Davidson, A. R.....Med. Dept. University of Buffalo..... Feb., 1878
Dorland, Elias T.....University of Michigan.....Mar. 24, 1854
Dye, John H.....Eclectic College of N. Y. City.....Feb. 29, 1873
Dayton, Charles L....Med. Dept. University of Buffalo.....Oct., 1853
Devening, Daniel....University City of N. Y. Med. Dept.....Mar. 6, 1846
Daggett, Byron H....Med. Dept. University of Buffalo.....Feb., 1867
Danforth, W. A.....Rush Med. College, Chicago. Ill.....Feb. 3, 1869
Dayton, L. P.....Geneva Med. College.....Feb., 1846
Dorr, Samuel G.....Med. Dept. University of Buffalo.....Feb., 1875
Denny, Mrs. Louisa..Victoria College, Kingston, Ont.....Oct. 10, 1845
Dambach, John.....Med. Dept. University of Buffalo.....Feb., 1868
Erb, Peter.....University of Michigan.....Mar. 26, 1879
Ellwood, Henry S....Med. Dept. University of Buffalo.....Feb., 1868
Elliott, Justin C.....Med. Dept. University of Buffalo.....Feb., 1851
Earl, W. C.....Bellevue College, N. Y.....Mar. 3, 1864
Eisbein, David.....Med. Dept. University of Buffalo.....Feb. 26, 1878
Farrington, Edwin H.Med. Dept. University of Buffalo.....Feb. 27, 1867
Bellevue Med. College.....Feb. 28, 1875
Fowler, Joseph.....Med. Dept. University of Buffalo.....Feb. 25, 1873
Foster, Hubbard A...Med. Dept. Harvard Univ. Boston, Mass...Mar. 8, 1877
Frost, Henry C.....Cleveland Homœopathic Med. College.....Feb. 11, 1874
Farrington, D. H....Med. Dept. University of Buffalo.....Feb., 1863
Folwell, M. B.....Med. Dept. University of Buffalo.....Feb., 1867
Fullerton, Mrs. M. A.Philadelphia Univ. of Medicine and Surgery.June, 1878
Gould, William.....Med. Dept. University of Buffalo.....Feb. 27, 1850
Granger, William D..Bellevue Hospital Medical College.....Mar., 1879
Gay, Charles C. F....Berkshire Medical institute..... 1846
Gail, William H.....Med. Dept. University of Buffalo.....Feb., 1864
Greene, Joseph C....Albany Medical College.....June 12, 1855
Greene, S. S.....Medical College of the University of N. Y...Mar., 1864
Gueso, Carl H.....Med. Dept. University of Buffalo.....Feb. 25, 1880
Grove, Benjamin H..Med. Dept. University of Buffalo.....Feb., 1880
Greene, Walter D....Med. Dept. University of Buffalo.....Feb. 26, 1878
Gigolsky, Bernhard...Kœnigsberg Hospital, Prussia.....Nov. 13, 1871
Gipple, F. M.....Med. Dep. University of Buffalo.....Feb. 25, 1880
Hancock, Alexander S.Toronto School of Medicine.....Apr. 25, 1868
College of Phys. and Surg., Ontario, Canada..Aug. 30, 1878
Hubbell, Alvin A....Med. Dept. University of Buffalo.....Feb. 23, 1876
Hoffmeyer, John A...Med. Dept. University of Buffalo.....Feb. 25. 1880
Haberstro, Joseph....Med, Dept. University of Buffalo.....Feb., 1880
Hoyer, Frederick F..Med. Dept. University of Buffalo.....April, 1849
Hauenstein, Jno.....Geneva Med College, State of N. Y.....Jan., 1844
Howard, Charles F...Med. Dept. University of Buffalo.....Feb., 1878
Harrington, D. W....Med. Dept, University of Buffalo.....Feb., 1871
Harvey, C. W.....Med. Dept. University of Buffalo..... 1838
Harvey, Leon F.....Jefferson Medical College, Pa.....Mar., 1859

NAME.	GRADUATE OF	DATE.
Hill, John D.	Med. Dept. University of Buffalo	Apr., 1849
Hartwig, Marcell.	Fred. Wilhelm's University at Berlin, Prussia	1873
	State Censors of the State of New York	1879
Howe, Lucien	Royal College of Surgeons, England	July 23, 1873
	Bellevue Medical College Long Island	1872
Hurd, S. Wright	Hahnemann Med. College of Philadelphia	Mar. 10, 1880
Hoxsie, A. C.	Cleveland Homœopathic Medical College	Feb., 1864
Hopkins, H. R.	Med. Dept. University of Buffalo	Feb., 1867
Hebenstreit, Robert.	Med. Dept. University of Buffalo	Feb., 1872
Halbert, John S.	Med. Dept. University of Buffalo	Feb., 1872
Hill, Clayton L.	Med. Dept. University of Buffalo	Feb., 1864
Heinemann, J. D.	Cleveland Homœopathic Hosp. College	Feb. 17, 1875
Henderson, Sallie B.	College of Phys. and Surg., Buffalo, N. Y.	Feb. 26, 1880
Hoyt, Horace	Med. Dept. University of Buffalo	June, 48
Henne, Christoph.	Buffalo Homœopathic Medical Society	May, 1876
Hinkley, Alonzo S.	Western College of Homœopathic Medicine Cleveland, O.	March, 1856
Johnson, Thomas M.	Med. Dept. University of Buffalo	Feb., 1861
Jackson, W. H.	South Carolina University	June 4, 1873
Johnston, E. E.	Med. Dept. University of Buffalo	Feb. 26, 1880
Krug, Julius F.	Med. College of Indiana. Department of Butler University	Mar. 1, 1878
Kilbourne, H. S.	University of Michigan	Mar., 1865
Kenyon, William B.	Homœopathic College of Philadelphia	Mar., 1874
King, J. F.	Med. Dept. University of Buffalo	June, 1847
Krombein, Louis E.	Med. Dept. University of Buffalo	Feb., 1860
Kenyon, Lorenzo M.	Homœopathic Medical College of Missouri	Feb., 1875
Keene, Jos. W.	Med. School of Harvard University	June 27, 1878
Kamerling, Andrew.	Med. Dept. University of Buffalo	Feb., 1864
Lanigan, John A.	University of the City of New York	Feb., 1876
Little, Edward.	Med. Dept. University of Buffalo	Feb., 1862
Long, William E.	Cleveland Homœopathic Hospital College	Feb. 25, 1880
Lothrop, Thomas.	University of Michigan	Mar. 25, 1858
Loomis, Horatio N.	The Faculty of the Medical College at Fairfield, Herk. Co., N. Y.	1828
Lynde, U. C.	Med. Dept. University of Buffalo	Feb., 1859
	And Jefferson Med. Coll.	Feb., 1866
Lothrop, Benj. L.	Bellevue Hospital Med. College	Feb., 1872
Lewis, Geo. W.	Med. Dept. University of New York	Mar., 1850
Lewis, F. Park.	Puelte Med. College	1876
Lou See On.	Lou Com Chong, a duly designated authority in Canton, China, July 28, in the 34th year of the reign of Ton Kong, Emperor of China	
Lapham, Geo. H.	Jefferson Medical College, Pa.	Mar., 1836
McGill, W. D.	H. M. College, Cleveland, O.	Feb. 25, 1880
McNeil, Dugald.	Med. Dept. University of Buffalo	Feb. 20, 1871
Myers, Reuben S.	Med. Dept University of Vermont	July 1, 1875
Mynter, Herman.	Med. Society of the State of N. Y.	June 1, 1875
McPherson, Geo W.	University of Michigan	Mar. 28, 1866
McMichael, L. D.	Eclectic Med. College of Philadelphia, Pa.	Jan. 23, 1868
Meisburger, Wm.	University of Freiburg, Germany	
Miller, John G.	Med. Dept. University of Buffalo	Feb., 1876
Moody, Mary B.	Med. Dept. University of Buffalo	Feb., 1876
Mixer, S. F.	Med. Dept. Yale Coll. and Ppys. and Surg. N. Y. City	Mar., 1847
McDonald, Samuel.	Med. Dept. University of Buffalo	Feb, 23, 1859

NAME.	GRADUATE OF.	DATE.
Miner, Julius F.	Albany Medical College	Jan. 26, 1847
Mackay, Gustavus E.	Med. Dept. University of Buffalo	Feb. 23, 1866
McCrea, Philip A.	Med. Dept. University of Buffalo	1875
Marclay, James J.	Coll. of Phys. and Surg., N. Y. City	Feb., 1873
Maizinger, Charles.	University of Wein, Germany	Jan. 17, 1830
Murray, William D.	National Med. College	Mar., 1859
Murray, Henry B.	Bellevue Hospital Medical College	Feb. 1868
Moore, Samuel H.	College of Phys. and Surg., New York	Mar. 14, 1867
Nichell, Henry.	Med. Dept. University of Buffalo	Feb. 25,
Nott, S. E. S. H.	Castleton Medical College	Nov., 1844
O'Connell Patrick M.	Missouri Medical College	Mar. 2, 1877
Osborne, Nehemiah.	Med. Dept. University of Buffalo	Feb., 1863
O'Brien, Edward C. W.	Med. Dept. University of Buffalo	Feb., 1867
Osborne, F. G.	Med. Dept. University of Buffalo	Feb., '68 or '69
Outwater, Samuel.	University of the City of New York	Mar. 12, 1879
Pynchon, Edward.	Medical College of Ohio, Cincinnati, O.	Mar. 2, 1876
Pohle, John D. A.	Cleveland Medical College	Feb. 2, 1880
Peterson, Frederick.	Med. Dept. University of Buffalo	Feb., 1880
Potter, Samuel.	Academy of Medicine, Vt.	Nov. 12, 1836
Pierce, Franklin D.	Univ. of the City of N. Y., Med. Dep't.	Feb. 19, 1878
Pattison, Geo. W.	Med. Dept. University of Buffalo	Feb. 24, 1869
Packwood, W. J.	Med. Dept. University of Buffalo	Feb., 1876
Pennell, Ezra.	Med. Dept. University of Buffalo	Feb. 27, 1867
Parker, L. P. L.	Med. Dept. University of Buffalo	Feb. 22, 1854
Phelps, Wm. C.	Med. Dept. University of Buffalo	Feb' 22, 1866
Pierce, Ray V.	Eclectic Med. College of Cincinnati, O.	Feb. 15, 1805
Petsch, Charles F.	Cleveland Homœopathic College	Feb., 1870
Pettit, John A.	Med. Dept. University of Buffalo	Feb., 24, 1874
Parnenter. W. L.	Homœopathic College of Cleveland, O.	Feb., 12, 1873
Rowe, George G.	University of Toronto	June 10, 1879
Ring, Charles A.	Med. Dept. University of Buffalo	Feb. 26, 1878
Rochester, Thomas F.	Med. Dep. University of Pennsylvania	Feb., 1848
Richmond, Ira.	New York Medical College	June, 1856
Rogers, Henry W.	Med. Dept. University of Buffalo	Feb., 25, 1880
Retel, Casper.	Matriculated in College of Physicians and Surgeons, Buffalo, 25 years' practice and candidated for graduation	Oct. 2, 1880
Ring, William.	Med. Dept. University of Buffalo	June 16, 1847
Rouse, M. D.	Med. Dept. University of Pennsylvania	Mar., 1866
Stumpf, Daniel B.	Cleveland Homœopathic College	Feb., 1876
Schade, Louis C. F.	Licensed by the Medical Society of the State of New York	July 22, 1876
Shaw, Merrill H.	Med. College at Geneva, N. Y.	1839
Stanley, Fred. G.	N. Y. Medical College, New York City	Mar., 1861
Stockton, Ghas. G.	Med. Dept. University of Buffalo	Feb., 1878
Sisson, Perry.	American Heath College, Cincinnati, O.	Oct., 1876
Storck, Edward.	University of Michigan	Mar., 1854
Searles, Macy B.	Med. Dept. University of Buffalo	Feb., 23, 1869
Simson, J. R.	Hom. Hosp. College, Cleveland, O.	Feb., 1880
Stearns, George R.	N. Y. Homœopathic Med. College	Feb. 28, 1878
Smith, Lee Herbert.	Med. Dept. University of Buffalo	Feb., 1877
Slacer, William H.	Med. Dept. University of Buffalo	Feb. 22, 1873
Storck, Eugene E.	Med. Dept. University of Buffalo	Feb., 1878
Strong, Phineas H.	Albany Medical College	Mar., 1839
Samo, J. B.	College of Phys. and Surg. New York City.	Mar. 28. 1832
Sonnick, P. L.	Mniversity of Wurzburg, Germany	Apr., 1853
Sm.th, James S.	Med. Dept. University of Buffalo	Feb. 25, 1862

NAME.	GRADUATE OF	DATE.
Seymour, Abby Janet.	Hahneman College, Chicago, Ill.....	..Mar., 1873
Sloan, James.....	Med. Dept. University of Buffalo	Feb. 22, 1870
Sweetland, Fred, W..	Med. Dept. University of Buffalo.....	Feb., 1878
Strong, Orville C.....	Med. Dept. University of Buffalo.....	1871
Sperry, M. M.....	Matriculated in College of Physicians and Surgeons and expects to graduate within specified time.....	1880
Shaw, M. B.....	Med. Dept. University of Buffalo.....	1866
Stevenson, James	D.G.44 years' practice, of which over 30 years has been in Buffalo, Erie Co., N. Y.....	
Sovereign, Baxter....	Hospital College, Cleveland, O.....	1869
Tyler, Clarence A....	Western Reserve College, Hudson, O.....	Mar. 12, 1874
Turner, A. F...	Cleveland Homœopatnic Hosp. Coll., O....	Mar., 1875
Thoma, L. Otto. ...	Med. Dept. University of Buffalo.....	Feb., 1870
Tobie, E.....	Geneva Medical College, N. Y.....	Feb. 10, 1855
Treffehn, H.....	University of Halle, Prussia.....	1846
Thompson, Justin G..	University of Michigan.....	Mar. 27, 1861
Turver, W. W.....	Bellevue Hospital Med. College, N. Y.....	Mar.. 1879
Thomas, Cesar.....	Grossherzoglich Badische, Albert Ludwig's Hochschule.....	Dec., 1877
Taylor, T. B.....	New York Central Med. Association.....	Sept., 1878
Trull, Hiram P.....	Med. Dept. University of Buffalo.....	Feb. 22, 1868
Volker, Louis C.....	Med. Dept. University of Buffalo.....	Feb., 1877
Van Peyma, W.....	University of Toronto.....	April, 1850
	State Curators of N. Y.....	June, 1860
Van Peyma, J. W....	University of Goningen, Holland.....	1841
Von Schulenberg, E..	Coll. of Physicians and Surgs., Buffalo, N. Y.	Feb. 20, 1880
Vaughn, Frank O....	Med. Dept. University of Buffalo.....	Feb. 25, 1880
Van Peyma, P. W....	Med. Dept. University of Buffalo.....	Feb., 1872
Walsh, John J.....	Med. Dept. University of Buffalo.....	Feb. 25, 1871
Weet, Elroy Sabin....	Med. Dept. University of Buffalo.....	Feb. 24, 1874
Wyckoff, Cornelius C.	Med. Dept. University of Buffalo.....	June, 1848
Wiggins, D. B.....	P. M. College of Cincinnati, O.....	Feb. 16, 1846
Wetzel, Charles H....	Med. Dept. University of Buffalo.....	Feb., 1876
Walton, John Tompkins	University of Pennsylvania at Phila., Pa....	Mar. 29, 1856
Willoughby, Mattnew.	Med. Dept. University of Buffalo.....	Feb., 1867
White, Russel J.....	New York Eclectic Medical College.....	Feb. 4, 1875
Wenz, Julius.....	Med. Dept. University of Buffalo.....	Feb. 21, 1865
Wetmore, Samuel W..	Med. Dept. University of Buffalo.....	Feb., 1862
Warren, Samuel H...	Med. Dept. University of Buffalo.....	Feb. 25, 1880
Wall, Charles A.....	Med. Dept. University of Buffalo.....	Feb., 1879
White, James P.....	Jefferson Medical College of Phila.....	Mar., 1834
Wage, Joan F.....	Detroit Homœopatnic College.....	Feb. 12, 1874
Willet, Phebe.....	Coll. of Phys. and Surg., Syracuse N. Y....	June 28, 1876
Wolsey, C. F.....	Ten years' Practice and Candidate for Graduation Col. of Phys. and Surg., Buffalo....	
Wende, Ernest.....	Med. Dept. University of Buffalo.....	Feb. 28, 1876
Waldruff, E. C.....	Med. Dept. University of Buffalo.....	Feb., 1880
Whitten, Clarke.....	American Medical College of St. Louis.....	Jan. 30, 1874
Wright, A. R.....	Cleveland Homœopatnic Hospital College...	Mar. 10, 1857
Zielinski, Jacob.....	Possen Medical Institute, Possen, Prussia...	1864

News and Miscellany.

OUR LITTLE "RUN-AWAY."

Complying with the solicitation of one of our patients living near New York city, we availed ourselves of the opportunity, while visiting them last week, of running over to the city and listening to the *Cannons*—yes, some of the Columbiads that have so long held the professional fort in the medical colleges of that great city.

We had the pleasure of listening to the instructive lectures and clinics delivered by Prof's Loomis, Little, Wright, Piffard, Flint, Sr.; Van Buren, Yale, Markoe, Sands, Thomas, Sabine, Clark, Detmold, and last, but not least by any means, Professor Sayre's private clinics at his office every a. m. Our old friend, the professor, was quite ill and we only had the pleasure of seeing him in bed, where we took occasion to sympathize as only one who has been in a like rheumatoid condition can.

Dr. Sayers' office and general business does not suffer, however, by his inability to attend to it, for his son, Dr. Louis a Sayre, Jr., is following the footsteps of his distinguished father ; has proven himself efficient, genial, jovial, and courteous, and, assisted by the gentlemanly Dr. Taylor, patients, visitors and students are made to feel that it is a pleasure to be with them. We would that there were more such gentlemen in the profession.

Dr. Taylor has proven himself to be quite an inventive genius. His *cheap* apparatus for extending the knee joint in disease is really a desideratum, and every surgeon should be familiar with it. We will take occasion to speak of this valuable instrument more fully in a later issue. Prof. Sayres' improved instrument for that purpose is, however, conceded to be the most efficient of any apparatus ever invented. This world-renowned orthopedic surgeon has made more rapid strides and greater improvements in the treatment of diseases of this hitherto neglected departmeut than *any other surgeon in the world*, and thousands are the prayers that are daily offered by those who have been saved from deformity and others for this noble, kind-hearted, generous, whole-souled gentleman, surgeon, and teacher.

The medical colleges in New York are all well filled.

We had the pleasure of being presented to a class—at the Univer-

sity—of some seven hundred. At the College of Physicians and Surgeons there are over five hundred, and at Bellevue over three hundred.

We were told that the requirements for admission into Bellevue Hospital College were so rigid that but few new students were admitted this present season. This speaks well for the institution, and if others would adopt their system there would be fewer but better doctors. We also learned that the Homœopathic, the Women's, and the Eclectic colleges had their usual number of students in attendance. Our old friend and former pupil, Dr. Gunn, whom we had not seen since he graduated in the University of Buffalo in 1864, was also sick, and at his earnest request we occupied a couple of his surgical hours at the U. S. College. We were pleased to meet a good large class of intelligent students, and did our best to make ths disease of the hip and ankle joints understood *a la* Sayre.

After as long a stay as our confreres would allow us, we returned to our own little amphitheatre of nearly sixty earnest, anxious, studious and intelligent pupils, with a feeling that our short respit had given us a little *vis a tergo*, and that our class, as well as ourselves, might be benefitted by our little "run-away." S. W. W.

At a meeting of the Physicians' and Surgeons' Publishing Association, held at the College Dec. 8, the annual election of the officers of the Investigator occurred. Prof. A. A. Hubbell, M. D., was elected Editor in Chief, and Prof. Chas. F. Howard, M. D., Business Editor for the ensuing year. The editorial staff will remain as heretofore, as seen in our prospectus. We can assure our readers that with these competent men at the head of the journal it will be kept in the front rank of medical literature.

A liberal offer to subscribers was made in our last issue, and a great number have already responded. We are enabled to do still better this month as we have quite a number of journals for October on hand that were inadvertantly mislaid, a copy of which, with the November and December numbers, will be furnished to every new subscriber, making fifteen months for $1.00. What medical journal can furnish 500 pages of solid reading matter for the same money?

All manuscripts, books for review, and exchanges, should be addressed to the incoming editor in chief, A. A. Hubbell, M. D., 485 Main street, Buffalo, N. Y.

All remittances for subscriptions, advertisements, etc., and all inquiries or correspondence with reference to the business of the INVESTIGATOR, should be addressed to the business manager, C. F. Howard, M. D., 1458 Main street, Buffalo, N. Y. S. W. W.

DO NOT FAIL to read our book notices this month and your attention will be called to Dr. Ranney's most excellent work on Surgical Diagnosis, as well as Walsh's Handy Ledger and Physician's Tablet, and Call-Book.

LATE.

The INVESTIGATOR is unusually late this month, due to a change of printers, who had just been providing themselves with new types, new presses, and new quarters, and we trust that the new and improved appearance of the journal will compensate for its late appearance. We are pleased to be able to transfer to our successors the INTESTIGATOR in its improved condition.

EXTRAORDINARY LOW TEMPERATURE.—Dr. Kosurew reports the case of a powerful, muscular Cossack, thirty-two years old, who, falling from a height, received a severe wound of the scalp penetrating to the bone. He lived for five days after, his pulse being only 44, and the temperature exhibiting only, on repeated and exact measurements, from 80.8° F. to 83° F. in the morning, and from 79° F. to 84.2° F. in the evening. On examination the scull was found uninjured. The blood of the sinuses and dura mater was of the color and consistence of tar, and the base of the brain was also gorged with a similar fluid. The medullary substance was of a doughy consistence, and exhibited numerous blood-points wherever sections were made.—*Med. Times and Gazette.*

PARAPHIMOSIS.—Bordinet recommends an ingenious plan of reducing the strangulating foreskin. Take a few hair pins, slip the rounded ends at intervals between the penis and the prepuce, and slide the latter forward npon them.

Reviews and Book Notices.

Wood's Library of Standard Medical Authors.

The eleventh volume of this very valuable series is before us. It is a very elaborate treatise on Ear diseases, by Albert H. Buck, M. D., instructor of Otology in College of Physicians and Surgeons, New York city. This volume is the largest of the series (with one exception), containing 411 pages. It is written in a clear and comprehensive style. It is illustrated with a goodly number of wood cuts, which facilitate a thorough understanding of the work.

The aim of the author in his Diagnosis and Treatment of Diseases of the Ear has been to present, in text-book form, a picture of diseases of this organ as they have appeared to him in private and hospital practice. He has also drawn illustrations from the experience of others, but in the main he has relied upon the material stored up in his own case-books, giving the methods of treatment which he has tested and found reliable.

The contents of the book is divisible into eleven chapters, and are considered as follows:

1. Sketch of the physiology of the organ of hearing.
2. Examination of the patient.
3. Diseases of the auricle.
4. Diseases of the external auditory canal.
5. Methods of examining the middle ear.
6. Diseases of the middle ear (non-purulent forms).
7. Diseases of the middle ear (purulent forms).
8. Fractures of the temporal bone.
9. Diseases of the mastoid process.
10. Miscellaneous condition of the drum-membrane, ossicles, and tympanic cavity.
11. Different forms of aural disease, in which the labrynth is believed to be involved.

Every chapter gives evidence of a master hand, and the production will well compare with any of its predecessors in the library.

William Wood & Company have done more for the student of medicine, the practitioner, and the profession generally, by their *Cheap* system of disseminating the choicest medical literature, than all the publishing houses in the United States combined. Our only wonder is, how can they afford it?

A Practical Treatise on Surgical Diagnosis, designed as a Manual for Practitioners and Students, by Ambrose L. Ranney, A. M., M. D., Adjunct Professor of Anatomy, and late Lecturer on the Surgical Diseases of the Genito-Urinary Organs and on Minor Surgery in University of the City of New York, Etc., Etc. Second Edition enlarged and revised,

A glance at this work is enough to satisfy the practical surgeon that it is *the* book of all others prepared for correcting errors in diagnosis of such diseases as are very liable to be confounded. It is not an elementary work, but a *text-book* in the full sense of the term. The contents are divisible into eight parts: Part one is devoted to diseases of the blood vessels, in all or nearly all their varied morbid conditions. Then follows the consideration of diseases of the joints, diseases of bone, dislocations, fractures, diseases of the male genitals, diseases of the abdominal cavity, and of the tissues generally.

After describing the most prominent symptoms of the foregoing diseases, the author arranges, in tabular form, the differential diagnosis of those general appearances and symptoms of which are similar. By this arrangement the student and practitioner can readily dissolve doubts and the more readily comprehend matters which at times, to the skilled operator even, may appear ambiguous. The entire work bears the marks of a master workman, who has evidently wrought in the quarries, has seen the ashler in the rough, and been instructed by the old masters in the *modus operandi* of hewing to the line from the cortex to the center. The de-

signs which he has placed on the trestle-board, to guide the craft, will be fou reliable, instructive, practical, and necessary. We recommend the work to o students, to the practical surgeon, and the profession generally. Certainly teacher should be without it. It is published by the popular house, William Wo & Co,, is printed from long primer type, has 470 pages, and can be obtai through all book-sellers. Price $3.00.

Diphtheria, by Rollin R. Gregg, M. D,

A review of this very readable little book was given in the September number the INVESTIGATOR. We understand the views of the author, which are very ratio al, are becoming generally conceded by the homœopathic fraternity, and the boo meets with a ready sale. It is published by the well-known publishing house Messrs. Mathews Bros. & Bryant, Buffalo, N. Y, Price $1.50.

Diaries, or Physicians' Visiting Lists.

We are in receipt of a multiplicity of Diaries for 1881, among which we wou call attention to that published by Lindsay & Blackiston, Philadelphia, Pa. It the thirteenth year of its publication. It is a Tuck-book, and contains an almana table of signs, Marshall Hall's Ready Method in Asphyxia Poisons and Antidot the Metrio or French decimal system of weights and measures, dosological table, table for calculating the period of utero-gestation, and a large number of bla leaves for patients' memoranda, etc., etc., arranged for 25, 50, and 100 patients p week.

Wm. Wood & Co. have furnished us with something entirely new, a very ne Spring-back Diary or Medical Record visiting list, gilt-edged and bound inmorocco.

In addition to the ordinary contents, it gives the doses of drugs used for sub cutaneous injection, doses of common and rare drugs, drugs suited for atomizatio inhalation, etc., disinfectants, chemical analysis of the urine, its amou during 24 hours, its odor and color, Lister's antiseptic solutions, and on the whol it is the neatest, most concise and compact of anything of the kind that has yet co to our notice.

After having written the above, we became the recipient of Walsh's *Physicians' Combined Call-Book and Tablet.*

After a careful examination of this book, we unhesitatingly pronounce it to be th most perfect and useful diary for physicians ever published.

It is gotten up in very neat style, russet leather, tinted edges and spring-back The first thirty-two pages are devoted to printed matter indispensible to the practi tioner, consisting of that usually found in diaries, and much besides that we have ne seen before in like books.

It is designed for any year, and almost any number of patients per week.

Its *Tablet* is so perfect that pencil or ink may be used and erased with equ facility, which is a great desideratum to the hurried physician. As a physician Diary this Call-book is the *ne plus ultra.* It only costs $1,50 and should be in th hands of every physician as well as *Walsh's Physicians' Handy Ledger,* which is day-book and ledger combined. It is extremely simple in its arrangement, and ingenious and perfect in its design as to meet the approbation of every practic book-keeper. It is a labor-saving ledger, and ten to fifteen minutes per day wi keep a large business well posted.

Mistakes are almost impossible, and when they do occur, they can be detected a glance, as the business of an entire year for each patient is on one small pa 10x6 inches, on which there is a space for charging up the visits for every day the year. A line being placed opposite each month at the end of which space given for the debtor and credit. There is also a large space given for noting speci charges in Surgical or Obstetrical cases as well as Miscellaneous attendance, et This is the cheapest ledger published, and will certainly come into general use soon as the medical world become familiar with it. Any one desirous of obtainin these very valuable productions can obtain them by addressing Ralph Walsh, M. D 332 C street, Washington, D. C. Price, $3.00 for 600 patients, and for 1,200 pa tients, $5.00. Reduction made to the trade. S. W. W.